

***Politics, Economics, and Federal Land Designation:***  
***Assessing the Economic Impact of Land Protection—***  
***Grand Staircase -Escalante National Monument***

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I. Introduction

In 2008, Utah State Representative Aaron Tilton sponsored House Joint Resolution 10 in the Utah State Legislature encouraging the United States Congress “not to designate new Utah wilderness areas” (1). HJR 10 specifically demanded that Congress not designate any additional Wilderness areas in Utah without the unanimous consent of the Utah Congressional Delegation and reaffirmed “the [Utah] Legislature’s strong support for continued public access and multiple use regarding public lands” (HJR 10 2008, 1). In support of this position, the resolution asserts that Utah relies on public lands for a variety of economic activities including “oil and natural gas development, mining, outdoor recreation and other multiple uses, rights of way for transportation, waterlines, electric transmission, and telecommunication lines” (HJR 10 2008, 2). Each of these activities fuel Utah’s economy and grow the State’s tax base. Removing them from the table is predicted to spell economic doom for Utah’s economy.

In direct contrast to this view, some have alleged that large federal land holdings and protected areas such as Wilderness may attract a different population than in private land counties and thereby may help generate economic growth. The Sonoran Institute recently noted:

“the presence of public lands is good for the economy. Personal income, adjusted for inflation, grows faster in counties with significant percentages of their land base in public ownership. What’s more, counties with protected lands—land set aside for conservation—show an even more marked increase in personal income” (2006).

This paper seeks to investigate the conflicting belief regarding the economic impacts of federally designated Wilderness through empirical statistical analysis of the economic conditions present in Wilderness and Non-Wilderness Counties over time.<sup>1</sup> Using U.S. Census Data for all counties across the United States we study the impact of Wilderness by examining whether there is an identifiable difference within the economies of Wilderness and Non-Wilderness Counties over time. Our statistical analysis of economic conditions shows that once federal transfers are controlled for neither total tax receipts nor total payroll appears to be affected by the presence of federally designated wilderness. In other words, Wilderness does not have a positive, monetary affect on the counties in which it resides.

We define “Wilderness Counties” as counties that contain any portion of a federally designated Wilderness area. Such federally designated Wilderness may include Wilderness designated pursuant to the Wilderness Act of 1964 and managed by the U.S. Forest Service, U.S. Fish and Wildlife Service (FWS), or National Park Service (NPS), and the Bureau of Land Management (BLM). We specifically exempt from our analysis Wilderness Study Areas and other de facto wilderness such as designated Roadless Areas inside National Forests and property managed to maintain “wilderness characteristics” by the BLM. We include, however, in our study other types of protected areas where the use, profile, and legal status strongly mimics wilderness and that are designated by the national government as National Parks, National Monuments, and National Recreation

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<sup>1</sup>While the scope of this paper is limited to the economic impacts of Wilderness designation, this effort represents the beginning phase of a more expansive study exploring how Wilderness and other federally protected lands impact the economies of rural counties and the quality of life of individuals who live therein. Through our research, we hope to shed light on a number of important questions identified in existing literature including whether there are long-term economic benefits from Wilderness designation, whether there are population impacts of Wilderness Designation, and whether Wilderness Counties offer greater quality of life than Non-Wilderness Counties.

Areas. We also do not consider protected areas designated by states such as State Forests, State Parks, and other state protected areas. Finally, we do not include within our analysis properties managed by the U.S. Department of Defense or Indian Reservations. In exempting these other types of land management areas, we hope to better understand the economic impact of federally protected areas over time. Following our broader statistical analysis we specifically consider the case of the designation of the Grand Staircase Escalante National Monument (GSNM).

#### **A. Impact of Federally Protected Lands**

As noted in the introduction, many local government officials bemoan the designation of protected areas as taking off the table a variety of economic activities that would help bolster local economies. In truth, the academic literature investigating the impact of protected area on counties is somewhat sparse. Some of the existing literature represents a critique of the efficiency of the federal government as land manager (See generally Anderson et al. 1999) and the expansive use of protected lands as a land management tool in departure from original congressional intent (Osterle 1997).

More directly on point, some of the existing research seems to support at least part of the claim that protected lands detrimentally impact local economies. Although their findings largely find limited long-term economic detriment to local economies, Ruzitis and Johnson (2000) find that federally protected Wilderness does shut down access to resources traditionally used for extractive economic activities. These losses may be somewhat offset by an increase in service sector activities, but the service sector jobs generally pay less than the extractive jobs that were lost. Although not quite as restrictive as Wilderness, National Parks remove much of the ability of local resource users to

develop extractive industries in the protected area. It is assumed that the negative impacts of Wilderness are largely identical to National Monument designations.

The duration of these impacts is somewhat unknown. Power (1991) for instance, conducts a case study examining the stringent rules in place protecting the ecosystem surrounding the Greater Yellowstone Area. He finds that extraction based industries have diminished over time and have been replaced by economic activities specifically dependent on preservation including tourism, permanent relocation to be closer to the natural amenities offered, recreational homes and cabins, and retirement. These results raise the question of whether there may be temporal effects on local economies within the designation of protected lands that merit further investigation.

The results indicating negative impacts of protected lands, however, are also by no means uniformly verified. Duffy-Deno (1998) for instance, finds no evidence that employment at a county level is adversely effected by the presence of federal protected lands. Rasker (2006) rejects the notion that federal land ownership negatively impacts counties. Using correlation and regression models to investigate how different management of public lands (including protected lands) impacts local counties' economies, he finds that public lands are associated with higher personal income tax levels in rural areas. Rasker rejects the idea that protected lands affect counties in a negative way.

Holmes and Hecox (2004) similarly find a positive relationship between economic growth and publicly protected lands. Through studying 113 rural counties, 43% of which contain public lands, the authors find that there is a significant, positive correlation between the percent of land designated as federally protected Wilderness and

population, income, and employment growth. They also find that growth of investment income and nonfarm self-employment income are correlated with presence of wilderness. Lorah and Southwick (2003) similarly find positive impacts of protected lands. Using county level data, the authors calculate the proportion of protected lands occurring within fifty miles of the center of the county. Applying this metric, the researchers find that the protection of these lands is positively correlated with high population growth and high employment and income growth.

Population dynamics and personal perceptions of protected lands represent another line of inquiry that may have a direct impact on county economics. The perception of Wilderness as a draw to move to or remain in a given area may create diverse economic opportunities and growth. Although Duffy-Deno (1998) finds no significant relationship between federally designated Wilderness and population, a variety of studies find a positive relationship. Rudzitis and Johansen (1991), use a survey of 2670 residents of wilderness counties to measure public opinion regarding public lands including Wilderness lands. They found that 53% moved to an area at least partially because of the presence of wild-lands, 81% felt wilderness was important and 65% were against mineral or energy development in such areas. This finding indicates that protected areas may create conditions that foster economic opportunities in addition to extractive uses. Shumway and Otterstram (2001) similarly find migration patterns toward counties with protected areas.

### ***III Theory Sketch***

Our evaluation focuses on one of the most basic assertions presented by proponents of protected land designation, including those who advocated the creation of

the Grand Staircase National Monument, that protection of physical lands should over time increase economic prosperity in communities where the protected land is located. This theory runs counter to other approaches that have generally focused on the consumptive extraction of resources in order to power economic development.

In response to these extractive theories and the decline of extractive industries over time an alternative proposition has developed that asserts that potential economic development can come from what is termed in the literature an area's amenities. (Deller, Tsai, Marcouiller, & English, 2003) The amenities theory of economic development asserts that by observing the change in economic activity as extractive industries declined a clear pattern can be identified where,

“Instead natural amenities, desirable lifestyles and a relatively high quality of life, give some communities an advantage in attracting and benefitting from tourists, retirees, footloose entrepreneurs....environmental amenities ... act as a catalyst in the transformation of stagnating extractive economies into diversified, relatively competitive amenity economies.” (Lorah P. A. 2000)

These assertions claim that future economic development for many rural counties can be found in attracting new residents and tourists thus creating new economic opportunities as these new individuals interact in the community (Rudzitis & Johansen, 1989). These assertions make good economic sense, as more tourists and residents are attracted to an area they bring with them resources that can be used to improve economic conditions generally, so long as those arriving bring resources with them. What those who advocate creating an amenity based economy further assert is that in order to attract those tourists and residents that are likely to bring with them the sorts of resources that are needed if this proposition is to succeed, is best accomplished through the preservation of natural amenities that exist in an area.

Again generically this makes good economic sense, residents and tourists are more likely to arrive in areas that have the amenities they desire. What then are these amenities? Here we return to the Protected Lands Hypothesis. A number of studies have asserted that natural lands are one of the chief amenities that draw resources to an amenity based economy. In 2006 the Sonoran Institute commissioned a large-scale report that looked at rural western counties and concluded that the protection of land in those counties contributes directly to an increase in economic prosperity, operationalized as the real wages of residents (The Sonoran Institute, 2006). The Sonora report is the culmination of a decade long debate between those who claim that protected lands improve economic conditions, and those that argue they harm them. This report however, used only correlated data to identify potential relationships, and did not publically release either the methodology of the report or the root data.

Scholars including John Loomis, Robert Richardson, and Paul Lorah have conducted a number of studies that attempt to tease out the economic effects of wilderness designation on local communities (Loomis and Richardson 2001; Lorah 2002). These authors conclude that the designation of wilderness in rural areas has a net positive effect on the economic wellbeing of both the community at large and the individual citizen. A number of scholars have challenged the methodology of these studies, which have primarily relied on correlation and expenditure data to make these claims and suggest that other models would be more appropriate in identifying the effects of wilderness (Keith and Fawson 1995; Dawson, Blahna, and Keith 1993).

The literature clearly suggests that a relationship should exist between wilderness designation and economic prosperity. We use this assertion to form the central hypothesis

of this study. That hypothesis is that the designation of the Grand Staircase Escalante National Monument had significant effects on the economic conditions of Kane and Garfield counties.

### **The Grand Staircase**

#### **II. Federally Designated Protected Lands and National Monuments and the Grand Staircase Escalante Introduced**

Beginning in the late 1800's, the U.S. Government began setting aside swaths of land under varying degrees of protection. These efforts resulted in the establishment of National Parks in 1887 with the creation of Yellowstone National Park and with the creation of National Forests beginning in 1891 through the establishment of the Yellowstone Timberland Reserve (now the Shoshone National Forest). The identified statutory purposes of each of these types of land reservations anticipated some degree of human usage. Parks were designated as places where individuals could visit to recreate in nature's grandeur. National Forests were set aside to conserve timber resources for future use.

#### **B. The Antiquities Act and National Monuments**

A new type of protection was enabled in 1906 through the creation of the Antiquities Act. The Act grew out of the primary concern over protecting archeological artifacts in the Southwestern United States (Coggins et al. 1993). The Act's language, however, was significantly broader. The Act states:

The President of the United States is authorized, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and may reserve as a part thereof parcels of land, the limits of which

in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected ... (16 U.S.C.A. § 431).

The earliest use of the Act followed in 1906 with the declaration of Devils Tower, a unique geological formation in Northeastern Wyoming, as the nation's first National Monument. Despite the language of the Act establishing the protection of "the smallest area compatible with the proper care and management of the objects to be protected," Presidents have regularly used the Act to set aside large areas. For instance, President Theodore Roosevelt used the Act to designate some 270,000 acres as a National Monument in the Grand Canyon. The Act was also used by President Franklin Roosevelt to declare 220,000 acres of area around the Grand Tetons as a National Monument in 1943. President Carter designated 56 million acres of Alaskan land as National Monuments in 1978.

Various local interests have challenged these declarations. One miner, for instance, challenged the declaration of the Grand Canyon before the United States Supreme Court in 1920 (*Cameron v. United States*, 252 U.S. 450 [1920]). The miner asserted that the President lacked such authority to claim large areas. The U.S. Supreme Court disagreed stating that "[t]he act under which the President proceeded empowered him to establish reserves" that contained "objects of historic or scientific interest." The Court found that the Grand Canyon certainly fell within this category due to its size and unique geology.

The State of Wyoming similarly sued the federal government over the designation of the area surrounding the Grand Tetons asserting that the area was not unique enough to be considered for a Monument. The U.S. Government asserted that there were historic attributes and various geologic formations, mineral deposits, and plant life that met the

conditions set out in the Act. A Federal District Court in Wyoming asserted in broad language that “if the Congress presumes to delegate its inherent authority to Executive Departments which exercise acquisitive proclivities not actually intended, the burden on the Congress to pass such remedial legislation” as may be necessary (*State of Wyoming v. Franke*, 58 F.Supp. 890 (D.Wyo.1945). To date, Congress has not acted to pass such legislation and limit the powers granted to the President under the Antiquities Act.

In February of 2010, State Representative Michael Noel from Kane County, Utah introduced House Concurrent Resolution 17 (H.C.R. 17) before the Utah State Legislature. H.C.R. 17, the “Concurrent Resolution Opposing the Use of Presidential Power to Create New National Monuments in Utah,” reflects Noel’s continuing deep resentment of the designation of the Grand Staircase Escalante National Monument in his home district of Kane County. The text of the Resolution urges the President and the United States Congress to forebear creating any new National Monuments and urges Congress “to check the President’s authority to exercise this power by amending the Antiquities Act to clarify its actual intent, which is to establish small discrete monuments or memorials as existed in Utah prior to the unfortunate creation of the 1996 Grand Staircase National Monument” (H.C.R. 17 2010, 1-2).

The Resolution further declares “that this unchecked exercise of power concentrated in the President portends serious consequences for Utah and essentially coronates the President, giving him the ultimate ability to determine the fate of nearly 70% of the entire state with the mere stroke of an unchecked presidential pen” (H.C.R. 17 2010 1). Noel’s feelings are not unique. On March 8, 2010, the Utah State House of Representatives overwhelmingly passed the H.C.R. 17 with a vote margin of 63 to 11 and

the Utah State Senate unanimously voted in favor of the measure three days later.<sup>2</sup>

Although it is tempting to pass off such feelings as simply reflecting the current political expediency generated by the anti-Washington sentiment present in Western rural political discourse, the ire regarding the creation of National Monuments has been sustained over many years. Many Utahans genuinely mistrust the federal government and fear further Presidential declarations of protected lands.

These feelings were fueled by the 1996 creation of the Grand Staircase Monument. The move to designate the nearly 1.9 million-acre National Monument was quite unpopular within the local populace. Many local officials complained bitterly about the dramatic negative economic impact that the designation. One newsmagazine reported in 1996 regarding the sentiments expressed by Kane County Commissioner Joe Judd:

Kane Commissioner Joe Judd fumed, 'The most powerful politician in the world just kicked me in the teeth.' Judd figures he can kiss goodbye the 900 jobs and millions in tax revenue promised by a coal mine that Andalex Resources Corp., a Dutch company, had planned for the sandstone bluffs and wind-carved buttes of the Kaiparowits Plateau. (Glick and Begley 1996 1)

In direct contrast to Commissioner Judd's view, many academics, environmentalists, and federal government officials have alleged that large federal land holdings and protected lands help generate economic growth. The Sonoran Institute, for example, recently noted:

[T]he presence of public lands is good for the economy. Personal income, adjusted for inflation, grows faster in counties with significant percentages of their land base in public ownership. What's more, counties with protected lands—land set aside for conservation—show an even more marked increase in personal income (2006).

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<sup>2</sup> One member of the Utah State House of Representatives and seven State Senators did not vote

National Park Service (NPS) data seems to bolster the finding that the National Park and Monument System contributes greatly to local economies.<sup>3</sup> 2008 data from all units administered by the NPS generated the following findings:

[P]ark visitors spent \$11.56 billion in the local region surrounding the parks in 2008. Local residents account for 9.8% of this spending. Visitors staying in motels and lodges outside the park account for 55% of the total spending, while non-local visitors on day trips contribute 21% of all spending (Stynes 2009).

All of this spending resulted in over 200,000 jobs with 4.4 billion dollars in labor income, and 6.9 billion dollars of value added. The industries most benefitted from this activity include lodging, restaurants, retail trade, and amusements (Stynes 2009). The federal government may also add to the local economy where parks exist by employing various workers to maintain the infrastructure or otherwise conduct the activities of the park.

### **III. The Grand Staircase Escalante National Monument**

The Grand Staircase Escalante National Monument was created by President Clinton in 1996. The Monument spans nearly 1.9 million acres in South-Central Utah along the Arizona border. The monument resides completely within Utah, and as can be seen in Figure 1 below, occupies the majority of Kane County and much of Garfield County. Each of these counties already contained a vast majority of public land. Much of this land had been placed in protected status. Bryce Canyon National Park, for instance, straddles Kane and Garfield Counties. Capitol Reef National Park crosses into eastern Garfield County, and much of Southern Kane County contains the Glen Canyon Dam National Recreation Area.

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<sup>3</sup> It should be pointed out that the NPS does not manage the Grand Staircase Escalante. Due to its size, the service declined management, leaving management decisions to the Bureau of Land Management. The Grand Staircase was the first National Monument not managed by the NPS.

**Figure 1**

(Bureau of Land Management 2009)

Located in a geologically diverse region, the Grand Staircase contains a treasure trove of mineral deposits. The area contains an estimated 62 billion tons of coal—estimated to be worth hundreds of billions of dollars. Also contained are large oil deposits, estimated at around 270 million barrels of oil. In the early 1990s, Andalex Resources Company, a Dutch based coal mining company, had acquired permits to mine coal from the area. Conoco Oil, PacifiCorp, and various other companies had also acquired permission to develop mineral extraction activities in the area.

In 1996, President Clinton stood atop the South Rim of the Grand Canyon in Arizona to make the announcement regarding the creation of the Monument.<sup>4</sup> In making the announcement, the President alluded to the vast mineral deposits found within the Grand Staircase. He stated, “[m]ining jobs are good jobs, and mining is important to our

<sup>4</sup> The fact that the President did not enter Utah in making the announcement was not lost on the local residents and further fueled the resentment regarding the creation of the Monument.

national economy and to our national security. But we can't have mines everywhere, and we shouldn't have mines that threaten our national treasures" (Clinton 1996, 1787). The national treasures contained in the Grand Staircase identified by the President included the area's aesthetic quality, geology, archeological artifacts, fossils, biology, and its history. Each of these items provides recreational opportunities for explorers and research opportunities for geologists, archeologists, biologists, and historians.

After its designation the Grand Staircase Escalante National Monument became the largest National Monument in the United States. Due to its size, the President established a new management regime for the park. Although the National Park Service had managed all National Monuments up to that date, the determination was made that the Grand Staircase would remain under the management of the Bureau of Land Management.

### **Testing the Economic Effects**

Much of existent work on the economic impact of wilderness has relied on cross sectional data, and in doing so provides an interesting snapshot of the correlative effects of wilderness and economic development. This approach however fails to capture and model effectively the lag that often exists in predicting economic outcomes. It is our belief that approaches of this sort while interesting, fail to adequately address the question of causality, and that a cross-sectional time series model is the more appropriate approach if the goal is teasing out causation. Further as we observed above wilderness designation has most often been investigated as a primarily regional phenomenon, and most studies have that have investigated these questions are interested in the broad effects of generic wilderness.

We assert that most appropriate way to test for the impact of wilderness is by looking at the county where the designation is made and those counties which are most like the county of interest at the time of designation. To do this we match both Garfield and Kane counties with other U.S. counties on land area, population, income, and education variables. Using a matching methodology we limit our consideration to the economic changes that occur among those counties.

This approach allows us to test whether the designation of wilderness changes the economic outcomes that would likely have happened absent that designation. As is always the case in the real world once an event has occurred it is impossible to know what would have happened had it not occurred. Much of the debate over wilderness designation hinges on this question. Our approach compares the newly designated wilderness county with counties that look and act in similar ways to the test county allows us at least a glimpse of what was likely to have happened without the designation.

This glimpse is possible because we compare whether the designation dummy variable is significant in the cross sectional time series regression. The expectation is that if designation affects economic outcomes the dummy variable should be significant. Using these methodological changes, we perform two sets of regressions, using the matched data, and use two different dependent variables both of which attempt to capture the economic development.

Our first measure of economic development is the total payroll expended in a county. Again we use this to proxy for economic development. This approach has the advantage of not being a direct function of the institutional arrangements that exist. (It could however be an indirect function of those institutions.) Further it is a measure that

speaks directly to the economic situation of individuals. We use payroll over total receipts on the assumption that payroll is more likely to remain within the county and have a direct impact on the geographic area that is the gross receipts of corporations. This measure is not a perfect proxy, and does not capture the capital investment, out of county workers, or most importantly retirees that do not receive payroll.

The second relies primarily on the tax receipts of a particular county to proxy for economic development. Using this dependent variable has a number of advantages, the data is likely largely complete, and in general local governments are required by state and federal statute to correctly report tax receipts, this reality provides some confidence in the data that self-reporting or estimations of economic activity do not provide. This dependent variable, however, is also not a perfect proxy, and there are significant institutional differences across states, regions, and often counties themselves about how, when, and why taxes may be collected. These differences are highly likely to be important predictors of tax receipts, and will exist in our model as omitted variables.

While neither of our dependent variables are ideal proxy's for economic development taken together they paint a relatively complete picture of the economic situation, and the expectation is that the presence of wilderness would affect both in nearly the same way, at the very least the direction should be the same.

The results of the designation the National Monument on the local economic conditions has largely remained an open question. Neither local elected officials nor the proponents of the monument have been able to quantify the effect of the monument on the local counties. The results of these regressions are found in tables 1 and 2.

Table One  
 Kane County  
 Cross Sectional Time Series<sup>5</sup>

	Model 1 Payroll	Model 2 Tax Receipts
Observations	263	267
R-SQ Overall	.8970	.7145
Variables	Payroll (Mill \$)	Tax Rec (Mill \$)
Grand Stair Case Designation	-13.8580*** (4.314)	-.6139 (3.5011)
Wilderness	-.6539 (3.9102)	1.6276 (2.0215)
Population	-.0047** (.0020)	.0013 (.0017)
Land Area	.0017 (.0014)	.0001 (.0011)
Households	.0262*** (.0049)	.0034 (.0037)
Change in Household	-.1712 (.1357)	-.0054 (.0986)
Birthrate	1.617** (.5303)	.2968 (.3500)
Infant Mortality Rate	-.0071 (.0627)	-.0245 (.0334)
School Enrollment	.0130 (.0032)	-.0081*** (.0026)
High School Graduation Rate	-.4221** (.1888)	-.2083** (.0942)
Median Household Income	.0016*** (.0003)	.0015*** (.0002)
Poverty Rate	.1182 (.3252)	.3384* (.2116)
Crime Rate	.0003 (.0009)	-.0007 (.0008)
Unemployment Rate	-.8065** (.7223)	-.7801*** (.2365)
Local Government Employment	-.0187*** (.0047)	.0022 (.0033)

Robust Standard Errors in Parentheses

\*P=.10 \*\*P=.05 \*\*\*P=.01

Table Two  
 Garfield County  
 Cross Sectional Time Series<sup>6</sup>

	Model 1	Model 2

<sup>5</sup> All Control variables are excluded from the table, but full table available upon request. We observe no changes in the direction or significance when compared to the broader model.

<sup>6</sup> All Control variables are excluded from the table, but full table available upon request. We observe no changes in the direction or significance when compared to the broader model.

	Payroll	Tax Receipts
Observations	263	267
R-SQ Overall	.8700	.7145
Variables	Payroll (Mill \$)	Tax Rec (Mill \$)
Grand Stair Case Designation	16.1536 (16.7021)	2.8784 (6.2604)
Wilderness	-1.8105 (12.0077)	13.9469** (6.7827)
Population	.0079 (.0041)	.0033* (.0019)
Land Area	.0082** (.0039)	-.0001 (.0016)
Households	.0192* (.0107)	-.0006 (.0044)
Change in Household	-.5871* (.3126)	-.0228 (.0855)
Birthrate	5.630*** (1.3899)	1.2937*** (.4641)
Infant Mortality Rate	.1566 (.2443)	.0120 (.0983)
School Enrollment	-.0069 (.0053)	-.0107*** (.0020)
High School Graduation Rate	-.3088 (.4822)	-.1676 (.1587)
Median Household Income	.0031*** (.0007)	.0012*** (.0003)
Poverty Rate	-.5674 (1.1554)	1.723*** (.4841)
Crime Rate	-.0016 (.0028)	-.0008 (.0008)
Unemployment Rate	-3.1359** (1.2324)	-1.3621*** (.4231)
Local Government Employment	-.01439 (.0118)	-.0069* (.0036)

Robust Standard Errors in Parentheses

\*P=.10 \*\*P=.05 \*\*\*P=.01

These results in three of the four models do not allow us to reject the null hypothesis of no effect of the designation occurs square well with our larger understanding of the influence of federal designations. The single result where the designation appears to have an effect is in Kane County where the designation appears to have cost the local economy between 5 and 22 million dollars in total payroll in comparison with the match counties for Kane. The evidence for increased payroll, however, as a measure of the gross economic activity shows no such effect. As well in

Garfield County we see no effect with relation to the comparison counties, and as we cannot reject the null find no evidence that the designation of the monument is either helping or hurting the Economy of Garfield County.

The net of our evaluation of the designation of the Grand Staircase National Monument is that like general protection, this specific designation has had little or no effect on the economic situation of the host counties. Only with respect to total payroll in a single model can we identify a statistically significant effect of the monument, and taken on sum these results confirm our broader results that as we cannot reject the null hypothesis we cannot confirm that either side of the debate over the economic effects of protected lands are correct.

#### ***VI Analysis and Conclusion***

The importance of economic development to those concerned about rural counties cannot be overstated, the extractive industries that have for so long been the life blood of these communities are under increasing pressure as reserves are depleted, cheaper alternatives are developed, and imported extractive resources compete in the market place.

That some would attempt to use the natural features that many of these counties have as a way to leverage economic development is certainly a potentially valuable undertaking. Those that claim to have a magic bullet like protection designation to improve economic conditions have failed to evaluate and understand the data fully. Only when large-scale federal transfers accompany the designation of wilderness does it appear that wilderness designation has a meaningful impact on the economic conditions of an area. That is not to say that for one county, designating an area for recreation

whether it be wilderness, a national park or other type of land use, may be a way to improve its economic conditions, and indeed we see some evidence for this proposition from the single significant result in our models. Nothing in this study precludes the wisdom of this use for individual counties if it is to their comparative advantage, rather the findings of this study indicate that the value of land protection without consideration of designation type cannot be taken as a given when considering the economic conditions of a particular area.

We instead suggest that the debate over the value of the protection of public lands should be less about their economic effects, and more about a John Muir-esque contemplation of the importance of wild places as “*...the people's cathedrals and churches, for no holier temple has ever been consecrated by the heart of man.*”

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